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- (a) preparing an artificial antigen presenting cell comprising attributes of any of the claims selected from the group consisting of claim 220, claim 222, claim 223, claim 228, claim 232, claim 233, claim 236, claim 246, claim 248, claim 249, claim 255, claim 262, claim 273, claim 275, claim 276, claim 282, claim 286, claim 287, claim 289, claim 300, claim 302, claim 303, claim 310, claim 314, claim 315, claim 317, claim 328, claim 341, claim 342, claim 344, claim 350, claim 354, claim 357, wherein the antigen in said artificial antigen presenting cell is said antigen of interest;
- (a) contacting the biological sample obtained in step (a) with the artificial antigen presenting cell obtained in step (b) to form an artificial antigen presenting cell:T cell complex; wherein at least one element of said artificial antigen presenting cell is associated with a label, said elements selected from the group consisting of said antigen of interest, an irrelevant molecule, a lipid layer, a lipid, an MHC molecule components, a co-stimulatory components, an adherent components, a cell modulation components, and an accessory molecule components; and
- C1 (a) detecting said label.

163. (Amended) A method of isolating T cells specific for an antigen of interest comprising:

- (a) obtaining a biological sample containing T cells which are specific for an antigen of interest;
- (b) preparing an artificial antigen presenting cell comprising attributes of any of the claims selected from the group consisting of claim 220, claim 222, claim 223, claim 228, claim 232, claim 233, claim 236, claim 246, claim 248, claim 249, claim 255, claim 262, claim 273, claim 275, claim 276, claim 282, claim 286, claim 287, claim 289, claim 300, claim 302, claim 303, claim 310, claim 314, claim 315, claim 317, claim 328, claim 341, claim 342, claim 344, claim 350, claim 354, claim 357, wherein the antigen in said artificial antigen presenting cell is said antigen of interest;
- (c) contacting the biological sample obtained in step (a) with the artificial antigen presenting cell obtained in step (b) to form an artificial antigen presenting cell:T cell complex; wherein at least one element of said artificial antigen presenting cell is associated with a label, said elements selected from the group consisting of said antigen

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of interest, an irrelevant molecule, a lipid layer, a lipid, an MHC molecule components, a co-stimulatory components, an adherent components, a cell modulation components, and an accessory molecule components;

(d) removing said artificial antigen presenting cell:T cell complex formed in step (c) from said biological sample; and

(e) separating T cells specific for said antigen of interest from said artificial antigen presenting cell:T cell complex.

167. (Amended) A method according to claim 165 wherein said biological sample is selected from the group consisting of whole blood, blood cells, blood plasma, and tissue.

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168. (Amended) A method of modulating T cell response comprising:

(a) isolating T cells which are specific for an antigen of interest using a method of claim 163; and

(b) contacting said isolated T cells with an artificial antigen presenting cell comprising attributes of any of the claims selected from the group consisting of claim 220, claim 222, claim 223, claim 228, claim 232, claim 233, claim 236, claim 246, claim 248, claim 249, claim 255, claim 262, claim 273, claim 275, claim 276, claim 282, claim 286, claim 287, claim 289, claim 300, claim 302, claim 303, claim 310, claim 314, claim 315, claim 317, claim 328, claim 341, claim 342, claim 344, claim 350, claim 354, claim 357, wherein said antigen presenting cell has an antigen of interest or a homologue of said antigen of interest, said artificial antigen presenting cell further having at least one molecule selected from the group consisting of an accessory molecule components, a co-stimulatory components, an adhesion components, and a cell modulation components.

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176. (Amended) A method of characterizing the functional state of antigen-specific T cells comprising:

(a) isolating T cells in accordance with the method of claim 163;

(b) extracting mRNA from said isolated T cells;

(c) obtaining cDNA corresponding to said extracted mRNA;

93 (d) evaluating the mRNA encoding proteins that govern function and phenotype of said antigen-specific T cells, said evaluation carried out by a method selected from the group consisting of (1) mRNA translation of said proteins and testing said proteins using antibodies against such proteins, and (2) rtPCR of the mRNA using primers specific for said proteins.

Please add New claims 381 and 382 as follows:

381. (New) A kit according to claim 198 wherein said artificial APCs have the further component of molecules for orienting molecules of interest selected from the group consisting of GM-1, a pentasaccharide, a ganglioside, and cholera toxin β subunit.

382. (New) An immunomodulatory column according to claim 215 wherein said column is used for a process of manipulating T cell populations, said process selected from the group consisting of identifying T cells specific for an antigen of interest according to claim 162, isolating T cells specific for an antigen of interest according to claim 163, modulating T cell response according to claim 168, characterizing the functional state of antigen-specific T cells according to claim 176, treating a condition in a subject which would be benefited by altering the functional pattern of cytokine production by certain antigen-specific T cells according to claim 186, treating a condition in a subject which would be benefited by increasing Th-1 response according to claim 189, identifying antigen-specific T cells specific for epitopes on a graft donor's tissue according to claim 195, and treating a recipient mammal to reduce rejection of allografts in a transplantation therapy regimen according to claim 196.

Remarks

1. The above referenced office letter was addressed to Wesley Ames. Applicants again request that all future correspondence be addressed to the attention of Douglas C. Murdock.
2. Attached to the February 14, 2002 office letter was a sheet titled "Attachment for PTO-948 (Rev. 03/01, or earlier) 6/18/01." This sheet describes "information on how to effect drawing changes" and notes that Applicant is required to submit drawing corrections within the